

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 53 (Cancelled)

54. (Amended) An apparatus comprising:

a thermal interface having a first side to attach to a cooling device ~~by way of an adhesive attached thereon~~, and a second side to receive heat from an integrated circuit by contacting the integrated circuit at a heat transfer area[[],];

~~wherein the an adhesive [[is]] attached to areas of the first side that lie outside of the heat transfer area~~ wherein the adhesive is attached to a portion of the first side that is outside the heat transfer area.

55. (Amended) The apparatus of claim 54, wherein the thermal interface comprises a film having a phase-change material to change ~~from a solid phase to a liquid phase~~ by receiving the heat from the integrated circuit.

56. (Previously Presented) The apparatus of claim 54, wherein the adhesive is attached along a plurality of edges of the thermal interface.

57. (Amended) The apparatus of claim [[54]] 56, wherein the plurality consists essentially of two.

58. (Amended) The apparatus of claim [[54]] 56, wherein the plurality comprises four.

59. (Amended) The apparatus of claim 54, wherein the adhesive is attached ~~around~~
along a periphery of the heat transfer area ~~and substantially not attached within~~
~~the heat transfer area.~~
60. (Amended) The apparatus of claim 54, wherein the adhesive ~~[[has]]~~ comprises a
strip having a thickness between about ~~[[0.125]]~~ 0.0125 millimeters and ~~[[0.25]]~~
0.025 millimeters.
61. (Amended) The apparatus of claim 54, further comprising the cooling device
attached to the first side of the thermal interface.
62. (Amended) The apparatus of claim 61, further comprising the integrated circuit
attached to the ~~thermal interface~~ second side of the thermal interface.
63. (Amended) ~~A device~~ An apparatus comprising:
- a cooling device to receive heat ~~generated by~~ from an integrated circuit;
- a phase changing thermal interface ~~[[film]]~~ to thermally couple the cooling device
with the integrated circuit, the phase changing thermal interface ~~[[film]]~~
comprising:
- a heat transfer area between the integrated circuit and the cooling device,
- a first surface to receive the heat ~~generated by~~ from the integrated circuit by
contacting the integrated circuit within the heat transfer area,
- a phase change material to change from a solid phase to a liquid phase by
absorbing the heat ~~received~~ from the integrated circuit at the first surface, and
- a second surface to provide the ~~received~~ heat to the cooling device by contacting
the cooling device within the heat transfer area; and

an adhesive to attach the thermal interface to the cooling device, wherein the adhesive is attached to the thermal interface substantially outside the heat transfer area.

64. (Amended) The apparatus of claim 63, wherein the ~~[[film]]~~ thermal interface comprises a Chomerics T443 film.
65. (Previously Presented) The apparatus of claim 63, wherein the adhesive comprises a pressure sensitive adhesive.
66. (Amended) The apparatus of claim 63, wherein the adhesive ~~has a~~ comprises a strip having a thickness between about ~~[[0.125]]~~ 0.0125 millimeters ~~and~~ ~~[[0.25]]~~ 0.025 millimeters.
67. (Amended) The apparatus of claim 63, wherein the adhesive ~~attaches the thermal interface to the cooling device~~ is attached at a plurality of edges of the thermal interface.
68. (Previously Presented) The apparatus of claim 67, wherein the plurality consists essentially of two.
69. (Amended) The apparatus of claim 63, wherein the adhesive is attached ~~at a plurality of locations~~ along a periphery of the thermal interface.
70. (Amended) The apparatus of claim 63, further comprising the integrated circuit attached to the first surface of the thermal interface to ~~generate the heat and to~~ provide the ~~generated~~ heat to the thermal interface.

71. (Amended) An apparatus comprising:

a thermal interface comprising ~~a heat transfer area having~~ a first surface to receive heat from a ~~device having a circuit~~ microelectronic device and having a second surface ~~to provide the heat~~;

a cooling device attached to the second surface to receive the heat ~~provided by~~ from the second surface of the thermal interface; and

adhesive means ~~to attach~~ for attaching the cooling device to the second surface of the ~~cooling device without obstructing heat transfer through the heat transfer area~~ thermal interface.

72. (Amended) The apparatus of claim 71, further comprising the ~~circuit~~ microelectronic device coupled with attached to the first surface of the thermal interface.

73. (Amended) The apparatus of claim 72, wherein the cooling device is pre-attached to the thermal interface substantially before the ~~circuit~~ microelectronic device is ~~coupled with~~ attached to the thermal interface.